

## ABSTRACT

Dynamic conditions present in a channel can quickly degrade signal quality, thereby reducing the data rate usable by a WLAN transmitter. For maximum throughput, the highest, reliable data rate available should be used. In accordance with one feature of an adaptive rate technique, a lookup RSSI from one or more acknowledgment packets can be determined. One or more valid data rates can then be determined, wherein a valid data rate has an RSSI threshold less than or equal to the lookup RSSI. An achievable throughput can be computed for each valid data rate based on a theoretical rate and a packet error rate (PER). The valid data rate having the highest achievable throughput can be chosen as the new transmission rate. A rate control table, which can include RSSI thresholds, UDP rates, and PERs for each supported data rate, can be updated based on actual transmission information.